

Math+Science Connection

Beginning Edition

Building Excitement and Success for Young Children

April 2014



TOOLS & TIDBITS

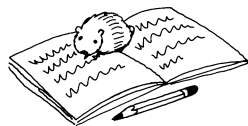
At a glance

Use a magazine for instant math learning.

Ask your youngster to open to a random page and spot a shape. There might be a circle or triangle in an ad, for instance. Or have him read all the numbers he can find on the page (a price, the page number). *Note:* This is a good waiting-room activity.

Gerbil journal

Help your child practice observation skills and learn more about animals. If you have a pet gerbil, goldfish, cat, or dog, encourage her to keep a journal for it. She might record its meals or describe how it plays. Suggest that she draw pictures, too. (If you don't have a pet, maybe she could observe a neighbor's animal.)



Web picks

Your youngster can go “addition fishing,” subtract for a “mad minute,” and much more at softschools.com/math/games.

Springtime means gardening! Give your child a glimpse into plants and gardening at urbanext.illinois.edu/firstgarden. (Also available in Spanish.)

Just for fun



Q: What has 100 heads and 100 tails?

A: One hundred pennies!

Math in a muffin tin

There's more to muffin tins than baking muffins or cupcakes! You can use them to do fun math activities, too. Try these.

Number your snacks

Let your child have her math and eat it, too. Number small sticky notes 1–12, and place one in each section of a muffin tin. Give your youngster cereal or raisins, and have her count out pieces to equal each number. Then, she could enjoy her snack. *Idea:* Pose math problems as she eats. “If you have the cereal from the 3 cup and the 4 cup, how many pieces will you eat?” Answer: $7 (3 + 4 = 7)$.


Match the dice

For this game, each player needs a muffin tin (or egg carton) numbered 1–12 and 12 tokens like buttons or dry macaroni. Take turns rolling dice—on every turn, it's your choice whether to roll one die or two dice. Then, put a token on the matching number (roll an 11, place a token in




the “11” cup). If you roll a number that's already filled, it's the next person's turn. The first one to fill her tin wins.

Solve the problem

Write math problems on 12 cupcake liners (one problem per liner), and ask your child to fit the liners into the tin. *Examples:* $3 + 6 = \underline{\quad}$, $19 - 14 = \underline{\quad}$. Take turns tossing in a penny, and do the math problem that your penny lands on. When you finish all of them, write more equations, and play again. 

Finding worms

Take a walk during or after a rainfall so your youngster can discover the wonderful world of worms:

- Encourage him to crouch down and peer closely at a worm. Which end is the head? He could tell by noticing which way it crawls. *Tip:* Take along a magnifying glass so he might examine a worm up close.
- Suggest that your child gently pick up a worm and allow it to crawl along his arm. Have him describe how it feels (wiggly, slimy).
- Ask him where worms usually are (underground). Why do you see them after it rains? You can explain that earthworms need to stay moist to survive. When the ground is wet, it's safe for them to come out and move around. 



Musical glasses

La la la... with this math and science activity, your child will turn ordinary drinking glasses into a musical instrument.

Set up. Ask your youngster to line up four identical tall glasses in a row. Then, help him measure $\frac{1}{2}$ cup water into the first glass, 1 cup into the second, $1\frac{1}{2}$ cup into the third, and 2 cups into the fourth. Suggest that he add a different food coloring to each glass so he can see the amounts of water more clearly.



Play. Have your child use a spoon to tap the side of each glass and listen for differences in the sounds. What happens if he taps higher or lower on the glasses? Encourage him to play tunes by tapping the glasses in different patterns (red, red, yellow, blue). He could also count the beat as he plays (1, 2, 3, 4, 1, 2, 3, 4).

Explain. Striking the glass with a spoon creates a sound wave that travels through the water. Water slows down the vibrations—so the more water in a glass, the slower the vibrations and the lower the pitch. Then, when there's less water, the vibrations are faster, and the pitch is higher.

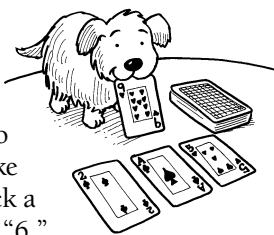


MATH CORNER It's a 10!

Learning the number pairs that equal 10 will help your youngster solve addition and subtraction problems more quickly. Play these card games to practice.

Note: Remove the face cards from a deck of cards. Ace = 1.

Make 10. Show your child a card—she has to say what number needs to be added to make 10. *Example:* Pick a 4, and she says, “6.”



Now it's her turn to show you a card so you can make 10.

Match for 10. Place the deck facedown. Turn over the top three cards, and lay them faceup (2, ace, 5). Then, player one takes a card from the deck (8). If she can pair it with any of the three cards to make 10, she says the number sentence ($2 + 8 = 10$) and takes the pair. If not, her card joins the other faceup cards. Continue drawing cards and making pairs until no more are possible. Whoever has the most pairs wins.

PARENT TO PARENT

Over, under, through

When it came to “position words,” my son Devin didn't seem to be getting it. He had trouble understanding the difference between going *over*, *under*, or *through* something. I asked his teacher about this, and she suggested ways to practice.

First, we lined up chairs to make a bridge. As Devin drove a toy truck *under* the chairs, we chanted, “Under, under.” When he drove it across the top, we said, “Over, over.” Then, as I read stories to him, I asked questions about the illustrations like “Where is the sun? Is it *above* or *below* the tree?” or “What is *next to* the spaceship?”

Finally, we've been playing “artist” by giving each other directions on where to put things in our pictures. Yesterday we decided to draw matching beach scenes. Devin started by saying, “Draw a fish swimming *through* the ocean.” When we were finished, we had fun comparing our pictures!



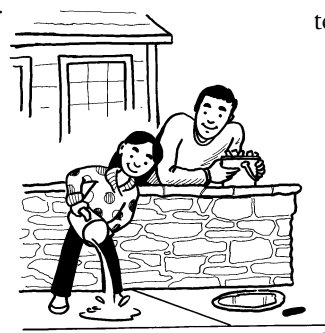
SCIENCE LAB

Where did the water go?

Experimenting with water outside will teach your little scientist about evaporation.

You'll need: cup or pitcher, water, chalk

Here's how: Let your child pour some water on a sidewalk. Then, ask her to draw around its edges with chalk to mark the spot. Have her check back several times: in an hour, in a few hours, and the next day. Each time, ask her to compare the water spot to the chalk outline.



What happens? The water spot will get smaller and smaller. Eventually, the water will disappear altogether.

Why? The water *evaporated*, or changed from a liquid to a gas. The water moved into the air in tiny drops—too small to see—that are called *water vapor*. You can explain that this is how puddles dry up, too.

Idea: Let her make two water spots, one in the sun and the other in the shade. Does the water disappear faster in the sun or the shade?

OUR PURPOSE

To provide busy parents with practical ways to promote their children's math and science skills.
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